Outdoor Recreationists and Where To Find Them

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2020

document version
Publisher's PDF, also known as Version of record

Chapter 1

General introduction

1.1 BACKGROUND

1.1.1 Outdoor recreation in Europe throughout the centuries

Leisure has formed part of the life of Europeans since at least the days of Ancient Greece (Hunnicutt, 2006). In the writings of Greek thinkers, leisure is for the first time identified as a cultural category of its own, clearly separated from and contrasted to 'work', and recognized as a cultural good that contributes greatly to human well-being (Simpson and Yoshioka, 1992; Sylvester, 1999). Nevertheless, the contrast between work and leisure is not always as straightforward: especially in early history, sports and physical exercise regularly evolved from military training, hunting practices, or religious rituals.

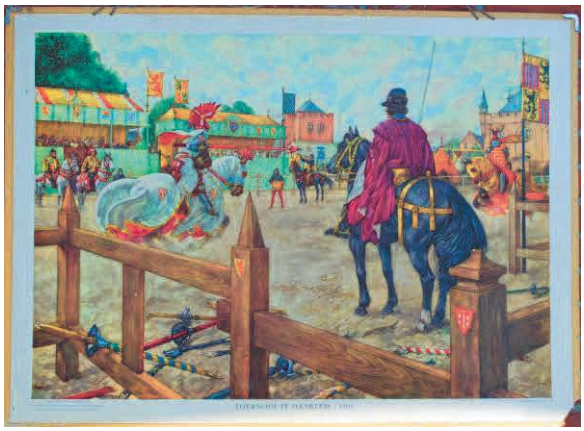
The ancient Greeks were also the first to develop infrastructure to accommodate leisure times activities (Golden, 1998). The Olympic games undoubtedly stand out as the most recognizable example of this interest for non-work related activity, but the favored pastimes of aristocrats were also often of a darker nature and for example involved the torture and exploitation of slaves, peasants or women (Hunnicutt, 2006). In Ancient Rome, gladiator spectacles and public executions belong to the same category of spare-time amusement that was as much about recreation as about the exertion of power (Auguet, 1994). Yet, Romans would also develop a strong affinity for nature as a locus of leisure, and poets like Virgil, Ovid, and Horace extolled the simple farming life as a means of self-fulfillment (Thibodeau, 2011).

Many of the leisure-time traditions established during Antiquity persisted into the Middle Ages (Hunnicutt, 2006). New were forms of what we would now call 'spiritual recreation'; men and women of religion completely withdrew themselves from the duties of civil life and either retreated to monasteries or convents, or went on pilgrimages to places of worship, something which from the closing of the Middle Ages would increasingly receive a holidaying nature. In addition, court culture developed games and pastimes of its own in which chivalric honor and military skill took central stage, as in the in later ages much-romanticized jousting tournaments (Blockmans and Hoppenbrouwers, 2006).

The relation between work and leisure was changed drastically under the influence of the Protestant Reformation and the onset of capitalism. In the Protestant worldview, work was what bestowed human life with meaning in God's greater plan; leisure, on the other hand, was dismissed as idleness, or at best as auxiliary to work. As so famously articulated by Max Weber (1930), the Protestant work ethic went hand in hand with capitalist ideals, in which work became the structuring element of society. Hunnicutt (2006) argues that this paradigm shift in thinking about work and leisure involved an impoverishment of recreational practices. Yet, the democratization and technological developments in communication and transport that followed in the wake of the Industrial Revolution at the same time also professionalized

and intensified the recreation market (Young, 2012). The nineteenth century witnesses, among much more, the construction of urban parks, the professionalization of modern sports, and the establishment of national parks, tourism associations, and travel agencies. Increasing literacy rates and new printing technologies transformed reading into a popular pastime among all layers of society and further contributed to the accessibility of other forms of leisure. In tourism, Thomas Cook successfully branded the first organized foreign-travel tours, while mass-produced travel guides like those by Baedeker and Murray found an enthusiastic readership throughout the Western world (Peverelli, 2019).

'A tournament in Haarlem, 1305' by Johan Herman Isings (1960). Image taken from ernie.uva.nl under Creative Commons license BY-NC-ND.



'A Sunday in Gutach' by Wilhelm Hasemann (1900). Image taken from ernie.uva.nl under Creative Commons license BY-NC-ND.

This intensification process continued into the twentieth century and gained significant pace after World War II. Improved working conditions (the 8-hour work week, contractual vacation arrangements), the transport revolution (ever more people could afford to buy a private motorized vehicle) and cheaper travel options paved the way for mass tourism (Bessel, 1996). In this period, a wealth of leisure possibilities became available to ever larger audiences, including cinema and theater visit, going to sport matches, or to zoos or museums. Outdoor recreation also took a flight, accommodated by the improvement of facilities and touristic infrastructure, as well as the development of urban parks, national parks, swimming beaches and lakes, hiking trails, sports terrains and so on (Jenkins and Pigram, 2004).

1.1.2 Understanding the concept of outdoor recreation

Recreation and tourism are interrelated concepts that are often confused. Although tourism is generally associated with leisure and vacationing, the term also covers activities that fall outside the spectrum of free time such as business travels (Williams, 1998). By contrast, recreation does solely refer to activities and experiences that take place in the sphere of leisure and free time. It is recreation, accordingly, that stands in the focus of this thesis. More precisely, the subject of research is 'outdoor recreation', understood here as short-term leisure time activities pursued in natural environments or nearby green spaces (Silvennoinen and Tyrväinen, 2001) that do not take longer than a day or an overnight stay (Daniel et al., 2012). Multi-day holidays are thus excluded from the definition. Included are activities that qualify as 'educational recreation' (Holdnak and Holland, 1996; Smith and Jenner, 1997) and 'spiritual recreation' (Sharpley and Jepson, 2011). Outdoor recreation is increasingly recognized as an important contribution of ecosystems to human well-being (Bennett et al., 2015; MEA, 2003; Plieninger et al., 2015). Accordingly, outdoor recreation is in the academic literature understood as a cultural ecosystem service (CES), which can be defined as the "non-material benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experiences" (MA, 2005, p. 4). CES thus provide a framework for both researchers and policy makers that helps them understand the cultural value of ecosystems in general (Fish et al., 2018) and that of outdoor recreation in particular.

Recreation in non-urban landscapes is ascribed ever growing importance in modern society and has a great number of economic, social, cultural, and environmental implications (Bell et al., 2007; Buckley, 2003). Next to the aforementioned beneficial effects on health and (emotional) well-being (Bell et al., 2007; Plieninger et al., 2015), outdoor recreation is said to improve social cohesion within neighborhoods and between different ethnic groups (Gentin, 2011). Additionally, nature-based recreation has evolved into an important economic sector in many communities worldwide, with many of the world's poorest countries being reliant on the tourism market as a catalyst for economic growth and prosperity (Hawkins, 2006).

On the other hand, there are also negative sides to outdoor recreation. Recent trends related to mass tourism and mass recreation have become a growing matter of concern, especially given the great cultural value attributed to outdoor recreation. The ever-expanding tourism market and growing visitor numbers put a heavy strain on the environment and lead to the overburdening of both urban and natural sites. The recent phenomenon of 'overtourism' for example has caused serious problems with regard to the environment and the 'Disneyfication' of historical cityscapes in such popular tourist destinations as Amsterdam, Barcelona, Dubrovnik, and Venice (this problem has been reported extensively on in the media, see for example "Reiseverhalten muss sich ändern", *Taggeschau*, 12 August 2019). Due to increasing urbanization with approx. 81,2% urban population in Europe by 2050 (World Population Prospects: The 2017 Revision) and the anticipated increase in international tourism (note that e.g. in China currently only 10% of the population owns a travel passport according to "Reiseverhalten muss sich ändern", *Taggeschau*, 12 August 2019), these problems are likely to spread towards peri-urban and rural areas. Research found that many icon sites in natural areas are showing signs of overuse in a development comparable to the over-traveling of urban tourist hotspots. More and more, tourism and recreation are reported as detrimental to the effective and sustainable management of protected areas, not in the least because iconic sites such as mountain peaks or waterfalls draw great numbers of recreationists, leading to serious over-visitation with all its negative effects (Hadwen et al., 2007).

Such recreational pressure in non-urban landscapes leads to environmental modifications especially concerning vegetation, soil, wildlife, and water resources (Dynowski et al., 2019; Marion et al., 2016), which can have a devastating effect on local ecosystems. The construction and preservation of touristic infrastructure – roads, hospitality accommodations, and so on – undoubtedly have damaging effects on the environment, but also the activities of the recreationists themselves have been found to be potentionally damaging the natural environment.

Concerning *vegetation*, Rankin et al. (2015) identified trampling, damage from recreational vehicles, the construction of touristic infrastructure, and the collecting of plants as the most common threats. As with regards to *soil*, Olive and Marion (2009) have argued that soil erosion and loss present possibly the most severe long-term impacts caused by recreation. Incessant trampling on much-visited recreation sites for example turns the soil hard and smooth, making it significantly less receptive for seed germination and the growth of plant roots (Alessa and Earnhart, 2000), while it simultaneously causes water to pool. Campfires likewise have a damaging effect as they can drastically change the chemical and organic composition of the soil, which in turn leads to a reduction in soil flora and fauna (Fenn et al., 1976, Cole and Dalle-Molle, 1982). Additionally, outdoor recreation inflicts a wide array of impacts on *animals* (Coppes et al., 2017), which can be subdivided into four main categories: exploitation

(the immediate death of wildlife, for instance through hunting), disturbance (leading to the temporal or spatial displacement of wildlife; think of noise or the invasion of territory), habitat alteration (such as the changes to the soil described above or alterations to water and vegetation), and pollution (through e.g. litter) (Pomerantz et al., 1988; Knight and Gutzwiller, 1995). *Water quality* can also be negatively affected by outdoor recreation activities, and not exclusively by those that take place through direct contact with the water, such as swimming or canoeing, but also by recreation close to water bodies, including camping or hiking (Cole and Landres, 1996; Cole, 2008). Water impacts can be categorized in three categories (Newsome et al., 2012; Hammitt et al., 2015). First, physical impacts include alterations in temperature and flow, increases in turbidity, as well as snow compaction. Secondly, biological impacts refer to the introduction or spread of non-native flora and fauna (Marion et al., 2016). Finally, chemical impacts result from unnatural elements polluting the water, such as cosmetic fluids, foods and other types of human and animal waste (Ursem et al., 2009).

1.2 RESEARCH DESIGN

1.2.1 Problem statement and research objectives

Following the objective to keep the impact of recreation on natural landscapes low, the development of new concepts to streamline visitation flows has come to the fore as a major concern for both scientists and policy makers (Hadwen et al., 2007). Quantifying outdoor recreation – as a necessary step in formulating such strategies – however presents several challenges related to the subjectivity and heterogeneity inherit to the concept of cultural ecosystem services (Plieninger et al., 2013). For one thing, outdoor recreation involves individuals' perception and enjoyment of the landscape and of recreational activities – impressions that are difficult to translate to hard data. The diversity of perceptions and forms of outdoor recreation makes quantifying and evaluating outdoor recreation also very context specific, which therefore requires the calibration of methods on a case-to-case basis; there is no one-size-fits-all solution.

From this it follows that the minimization of resource impacts is reliant on detailed information on site characteristics on the one hand and the various ways in which recreationists interact with natural resources on the other (Marion et al., 2016). A first step in the formulation of effective management plans involves a comprehensive assessment of the various types of recreation-induced impacts in a specific area, including their severity, extent, and spatial distribution. This requires in-depth information on visitation numbers (Marion et al., 2016), but also e.g. socio-economic and demographic characteristics of recreationsts, including residential location and ethnicity (Dearden, 1984; Howley et al., 2012; Strumse, 1996). Given the normative nature of cultural ecosystem services, quantifying outdoor recreation additionally requires a comprehensive assessment of the perceptions and value assignments of users (Daniel et al., 2012; Weyland and Laterra, 2014), determining their overall recreational behaviour. For instance, Teisl et al. (2005) found that the level of recreationists' environmental concern is partly dependent on the type of recreational activity they engage in. Several studies established a correlation between wildlife tourism and people's involvement in habitat protection programs (Ballantyne et al., 2011; Cooper et al., 2015). However, Newhouse et al. (2009) concluded that the personal motivation behind the choice of outdoor activity – for example, seeking solitude, enjoying nature, thrill seeking, educational motivations – might be equally important or even more important in determining recreationists' consideration for the environment than the actual activity itself. Although differentiating between different user groups in outdoor recreation has thus been identified as a crucial concern for sustainable landscape management, the research that has been done on this subject has so far remained limited as most studies on outdoor recreation - with the exception of a few case studies (see e.g. De Groot and Van den Born, 2003; Devesa et al., 2010) - do not cover the heterogeneity among recreationists in a systematic way. User group differentiation accordingly requires more attention from environmental researchers as well as policy makers.

There is a variety of methods available to acquire heterogeneous information for understanding the complexities of outdoor recreation. These methods each address different aspects of outdoor recreation and can help develop concepts for the streamlining of visitors temporally and spatially. Most of these methods are conventional as for instance surveys (see, e.g. Kloek et al., 2015; Beery and Jönsson, 2017) or discrete choice experiments (see, e.g. Torquati et al., 2017, Barkmann and Zschiegner, 2010). Technological developments have however diversified recreational activities – think of drones, geocaching, and off-trail hiking – and developing new methods that can take these recent trends into consideration might be a necessity (Marion et al., 2016). These same technological developments also offer new tools with which to study outdoor recreation, such as GPS-tracking or the analysis of social media data.

The main objective of the thesis is to generate a better understanding of how outdoor recreation preferences in European landscapes can be quantified. Improved insights about outdoor recreationists can help decision makers in further targeting landscape planning activities and interventions contributing to sustainable and resilient peri-urban landscapes that can fulfill the demand for outdoor recreation by different user groups. The two main research questions are as follows:

RQ1 How can variations in the user groups of outdoor recreation be distinguished?
RQ2 How does the choice for different data gathering methods influence the information retrieved on outdoor recreation preferences?

1.2.2 Structure of this thesis

This thesis comprises six chapters including the introduction (see Figure 1). In chapters 2-5 outdoor recreation preferences at different scales and in different contexts are discussed while chapter 6 provides an overall synthesis of the research.

A characterization of outdoor recreation user groups in European landscapes based on the identification of variations in outdoor recreation preferences was provided in chapters 2 and 3 (RQ1). On the basis of an elaborate literature review, chapter 2 presented an archetypical user group distinction of outdoor recreationists based on the variation in recreation focus and landscape preferences of different recreational user groups. The theoretical basis for this typology was Cohen's phenomenology of tourist experiences (Cohen, 1979). Spatial maps were developed based on this typology of five different outdoor recreation user groups that visualize the potential of landscapes throughout the EU to be used by these specific user groups. Chapter 3 moved from the supranational level of the EU to that of a local case study in the Netherlands, where a user group typology was developed not based on theory, but on empirical data on outdoor recreation preferences, including landscape preferences, visitation behaviour, and socio-demographic information. In addition to this, chapter 3 compared two

data-driven methods in order to establish how the choice of method influences typology development. Taken together, chapters 2 and 3 discussed different – both theoretically-driven and empirically-driven – ways in which variations in outdoor recreation can be captured in user group typologies, while addressing several methodological issues related to dealing with this diversity.

In chapters 4 and 5 the focus shifts to the second research question (RQ2) and the comparison of different data gathering methods for quantifying outdoor recreation preferences. Chapter 4 addresses local landscape planning and management issues related to outdoor recreation. I applied and compared methods identifying spatial patterns of both the current use of the landscape and the potential (future) use of the landscape for outdoor recreation. By comparison, chapter 5 performs a more in-depth analysis concerning the varying capacities of methods to capture different aspects of outdoor recreation preferences, both landscape preferences (physical, semantic, perceptual, cultural features and so on) and spatial preferences, using a variety of direct (here: survey) and indirect (here: social media data) engagement methods for data gathering. The comparison is conducted in two different study regions to broaden the applicability of the findings beyond the specific context of a single case study.

The insights gained in Chapter 2-5 are discussed, research questions (§1.2.1) are answered and a synthesis of the results within the scientific and societal field is provided in the concluding chapter.

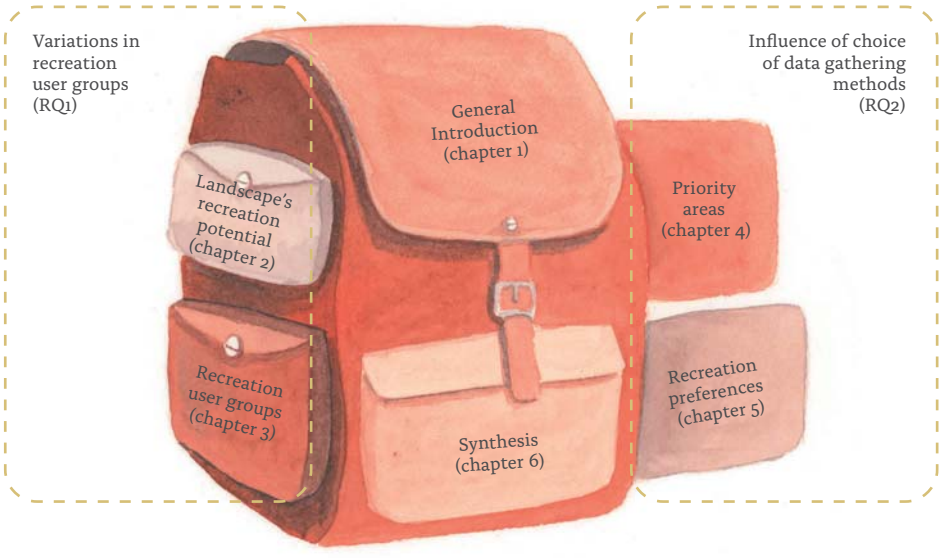


Figure 1: Schematic display of the four main chapters in this thesis.

1.2.3 Study areas

In this thesis I have chosen two study sites that show similarities in the physical landscape settings as well as the uses and functions assigned to these landscapes, namely the Kromme Rijn area which has been subject of study in chapter 3-5 and the Zürcher Weinland which has been subject of study in chapter 5 (see Figure 2).

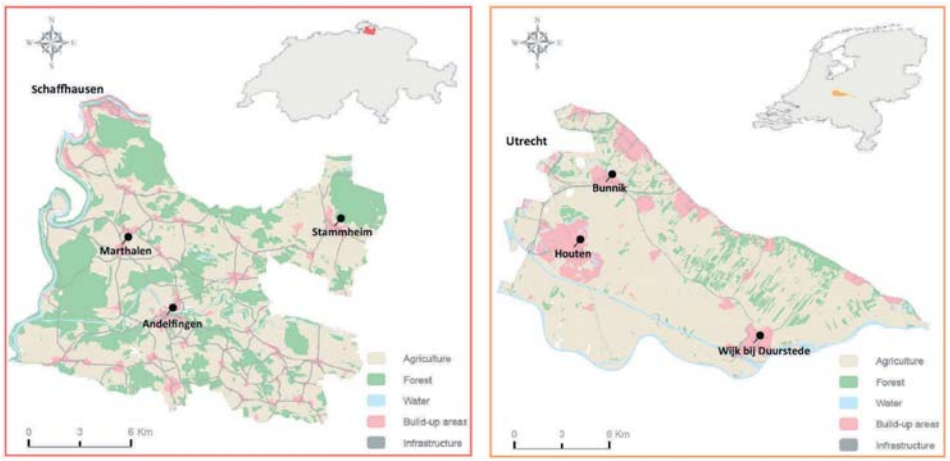


Figure 2: Location of the Swiss (left) and Dutch (right) case study area.

The Kromme Rijn area is situated in the heart of the Netherlands, east of the city of Utrecht (Figure 2). The area derives its name from the 28km-long river flowing from the Nederrijn river near the city of Wijk bij Duurstede westwards to the moat around Utrecht's historic city centre. A former offshoot of the Rhine, Kromme Rijn literally translates to "Crooked Rhine" in reference to the many bends that characterizes its trajectory through the landscape. Current land use in the area is strongly influenced by the river's fluvial deposits. Fruit orchards are a characteristic landscape element; the clay levee and sandy deposits of the former riverbed form a fertile soil for fruit cultivation, which focuses on growing cherries, pears, and apples. After a period of decline, fruit cultivation has re-established itself in recent years as a financially important and expanding agroeconomic sector (AVP, 2007; LOS stadomland, 2016). Dairy farming is another agricultural sector of import, finding suitable areal on lower lying grasslands. By contrast, only small patches of land are dedicated to the growing of cereals (27 ha) and vegetables (1 ha). (Provincie Utrecht, 2016). Forest areas are likewise relatively small and dominated by the ash-coppice and the willow-coppice.

The area harbors many sites of cultural-historical interest, including old estates, medieval castles, windmills, and fortresses belonging to the New Dutch Waterline, a series of water-based defenses that is a nominated UNESCO world heritage site. Some of these sites are open to the public and are home to a museum or eating-house.

The Lek river forms the southern border of the area and contains a number of man-made beaches used for water recreation. Parts of the river's forelands are closed-off and serve as breeding ground for a number of protected bird species. The dike running alongside the river is popular among cyclists and motor-cyclists.

The Zürcher Weinland is located in northern Switzerland in the canton of Zurich. A peri-urban and riverine landscape like the Kromme Rijn area, the Zürcher Weinland is traversed by the river Thur, while the Rhine forms the region's western and northern border; the area also contains the Thurauen, the largest floodplain in Central Switzerland. Viticulture is the most important agricultural sector in the area, which with its ca. 218 ha of vineyard is the largest wine growing region in the canton (Branchenverband Zürcher Wein; 2019). Other crops that are cultivated in the area include melons, asparagus, hops, and tobacco.

The two most well-known touristic sites in the area are Rheinau Abbey and the Rheinfall, Europe's most powerful waterfall. Otherwise the area is speckled with scenic villages, castles, and historic churches and chapels. Next to cultural heritage, the Weinland is well-suited for a range of outdoor activities, including hiking, cycling, horseback riding, canoeing, and swimming owing to its profound touristic infrastructure and its diverse natural landscape which contains forests, riversides, and wetlands. Also the local gastronomy is a touristic pull factor, with of course the characteristic vineyards as a particular attraction.

Although there are notable differences between the Kromme Rijn area and the Zürcher Weinland, for instance in terms of scale, relief, and openness, they can both be classified as peri-urban cultural landscapes with a multifunctional land use, combining residential, agricultural, and recreational landscape functions. In both regions, outdoor recreation is an integrated part of landscape management and in important part of the local economy. The main recreation areas are defined by their diversity, both in terms of the landscape elements they harbor – including rivers, forests, and cultural heritage – and the activities that they accommodate, ranging from sunbathing to hiking, biking, and paragliding.